

REMARKS

Initially, applicants would like to thank Examiner He for granting an interview and for her time spent during the interview.

Claims 1, 2 and 4-23 are pending.

The claims have been amended as suggested at the interview to clarify that the device is for detection in a liquid. Support for this limitation may be found on page 27 to page 10, line 23.

Claims 1, 4-6, 8-10, 13-16, 18, 22 and 23 were rejected under 35 USC 103(a) as being unpatentable over KOBRIN et al. 5,936,150 in view of KOSSLINGER et al. (disclosed by applicant on page 2, lines 4-24 of the present specification). That rejection is respectfully traversed.

As pointed out at the interview, one of ordinary skill in the art would recognize that the polar c-axes of the crystallites of the piezoceramic film of KOBRIN are oriented perpendicular to the surface of the substrate. Such a configuration limits KOBRIN to longitudinal mode oscillation, which is used to detect a substance in a vapor. In such a mode, the resonance is strongly attenuated by a liquid.

Moreover, as pointed out at the interview, KOBRIN must be used in longitudinal mode in order for the acoustic isolator of KOBRIN to function as it was intended. Column 2, lines 42-62

describe the use of the acoustic isolator in a longitudinal configuration to obtain acoustical isolation.

Thus, there is no motivation to combine KOBRIN with any reference that teaches thickness shear mode oscillation. Accordingly, claim 1 and the claims that depend therefrom are believed patentable over the proposed combination of references.

Claim 2 was rejected over KOBRIN et al. in view of KOSSLINGER et al. and further in view of H. BALTES (disclosed by applicant on page 4, line 29 to page 5, line 21 of the present specification). That rejection is respectfully traversed.

H. BALTES does not overcome the shortcoming of the KOBRIN/KOSSLINGER combination set forth above with respect to claim 1. Since claim 2 depends from claim 1, claim 2 is believed patentable at least for depending from an allowable independent claim.

Claim 7 was rejected over KOBRIN et al. in view of KOSSLINGER et al. and further in view of HIRAMA et al. 4,870,313. That rejection is respectfully traversed.

HIRAMA does not overcome the shortcoming of the KOBRIN/KOSSLINGER combination set forth above with respect to claim 1. Since claim 7 depends from claim 1, claim 7 is believed patentable at least for depending from an allowable independent claim.

Claims 11 and 12 were rejected over KOBRIN et al. in view of KOSSLINGER et al. and further in view of CHANG et al. 6,607,934. That rejection is respectfully traversed.

CHANG does not overcome the shortcoming of the KOBRIN/KOSSLINGER combination set forth above with respect to claim 1. Since claims 11 and 12 depend from claim 1, claims 11 and 12 are believed patentable at least for depending from an allowable independent claim.

Claim 17 was rejected over KOBRIN et al. in view of KOSSLINGER et al. and further in view of BAER et al. 5,130,257. That rejection is respectfully traversed.

BAER does not overcome the shortcoming of the KOBRIN/KOSSLINGER combination set forth above with respect to claim 1. Since claim 17 depends from claim 1, claim 17 is believed patentable at least for depending from an allowable independent claim.

Claims 19-21 were rejected over KOBRIN et al. in view of KOSSLINGER et al. and further in view of ZHANG et al. 2005/0148065. That rejection is respectfully traversed.

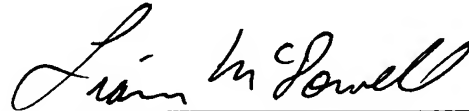
ZHANG does not overcome the shortcoming of the KOBRIN/KOSSLINGER combination set forth above with respect to claim 1. Since claims 19-21 depend from claim 1, claims 19-21 are believed patentable at least for depending from an allowable independent claim.

In view of the present amendment, and the foregoing remarks, therefore, it is believed that this application has been placed in condition for allowance, and reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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